CLAIMS

What is claimed is:

1. A method for deploying at least one cable into a conduit located within a well, comprising:

deploying a conduit within a well;

providing at least one cable;

passing at least portions of the at least one cable along the conduit; and

pulsing a fluid along the conduit to intermittently force the at least one cable along the conduit.

2. The method of claim 1, wherein the fluid comprises a liquid.

3. The method of claim 1, wherein the fluid comprises a gas.

4. The method of claim 3, wherein the gas is selected from the group consisting of nitrogen, air, or a gas from the family of inert gases.

5. The method of claim 1, wherein the fluid comprises a combination of a fluid and a gas.

6. The method of claim 1, wherein the at least one cable is a fiber optic cable.

7. The method of claim 1, further comprising measuring at least one parameter of interest within the well by use of the at least one cable.

8. The method of claim 7, wherein the measuring step comprises providing the at least one cable with at least one measurement location along its length.

9. The method of claim 8, wherein the measuring step comprises providing the at least one cable with a plurality of measurement locations distributed along its length.

10. The method of claim 7, wherein the parameter of interest measured is selected from the group consisting of temperature, distributed temperature, pressure, acoustic energy, electric current, magnetic field, electric field, flow, chemical properties, or a combination thereof.

11. The method of claim 1, wherein the pulsing step comprises pulsing the fluid at a lower pressure and then at a higher pressure.

12. The method of claim 1, further comprising cleaning the interior of the conduit prior to passing the at least one cable through the conduit.

13. The method of claim 1, further comprising drying the interior of the conduit prior to passing the at least one cable through the conduit.

14. The method of claim 1, further comprising removing non-miscible fluids prior to pasting the least one cable through the conduit.

15. The method of claim 1, further comprising passing a solvent through the conduit prior to passing the at least one cable through the conduit.

16. The method of claim 15, further comprising, prior to the passing the solvent step, purging any liquid present in the interior of the conduit by passing a gas through the conduit.

17. The method of claim 15, further comprising letting the solvent stand in the conduit for an amount of time.

18. The method of claim 17, further comprising purging the solvent from the conduit by passing a gas through the conduit.

19. The method of claim 1, further comprising, subsequent to the pulsing step, venting the pressure found within the conduit.

20. The method of claim 1, further comprising, subsequent to the pulsing step, maintaining the interior of the conduit at an elevated pressure.

21. The method of claim 20, wherein the elevated pressure is higher than the pressure external to the conduit.

22. The method of claim 21, wherein a different fluid is used during the pulsing step than during the maintaining step.

23. The method of claim 1, wherein the pulsing step occurs after the deploying step.

24. The method of claim 1, wherein the pulsing step occurs prior to the deploying step.

25. The method of claim 24, further comprising maintaining the interior of the conduit at an elevated pressure at least during the deploying step.

26. A system used to deploy a cable into a conduit located within a well, comprising:
a conduit adapted to be located within a well;
at least one cable adapted to be disposed within the conduit; and
an installation unit connected to the conduit and including a fluid unit for pulsing a fluid along the conduit to intermittently force the at least one cable along the conduit.

27. The system of claim 26, wherein the fluid comprises a liquid.

28. The system of claim 26, wherein the fluid comprises a gas.

29. The system of claim 28, wherein the gas is selected from the group consisting of nitrogen, air, or a gas from the family of inert gases.

30. The system of claim 26, wherein the fluid comprises a combination of gas and liquid.

31. The system of claim 26, wherein the at least one cable is a fiber optic cable.

32. The system of claim 26, wherein the at least one cable is adapted to measure at least one parameter of interest within the well.

33. The system of claim 32, wherein the at least one cable includes at least one parameter measurement location along its length.

34. The system of claim 33, wherein the at least one cable includes a plurality of parameter measurement locations distributed along its length.

35. The system of claim 32, wherein the parameter of interest measured is selected from the group consisting of temperature, distributed temperature, pressure, acoustic energy, electric current, magnetic field, electric field, flow, chemical properties, or a combination thereof.

36. The system of claim 32, further comprising an interrogation unit in communication with the at least one cable for receiving signals representative of the measured parameter.

37. The system of claim 26, wherein the conduit has a U-shape so that a return line extends from the well to the exterior of the well.

38. The system of claim 26, wherein pressure in the conduit is vented after the at least one cable is deployed in the conduit.

39. The system of claim 26, wherein the fluid pulse is at a lower pressure and then at a higher pressure.

40. The system of claim 26, wherein a solvent is deployed within the conduit prior to the fluid being pulsed through the conduit.

41. The system of claim 26, wherein the conduit is cleaned prior to the at least one cable being disposed in the conduit.

42. The system of claim 26, wherein the conduit is dried prior to the at least one cable being disposed in the conduit.

43. The system of claim 26, wherein non-miscible fluids are removed from the conduit prior to the at least one cable being disposed in the conduit.

44. The system of claim 26, wherein the interior of the conduit is maintained at an elevated pressure.

45. The system of claim 44, wherein the elevated pressure is higher than the pressure external to the conduit.

46. The system of claim 44, wherein a different fluid is used for pulsing than for maintaining an elevated pressure.

47. The system of claim 26, wherein the at least one cable is forced along the conduit when the conduit is located in the well.

48. The system of claim 26, wherein the at least one cable is forced along the conduit prior to the conduit being located in the well.

49. The system of claim 48, wherein the interior of the conduit is maintained at an elevated pressure at least as the conduit is being located in the well.

50. A method for deploying at least one cable into a conduit, comprising:

providing at least one cable and a conduit;

passing at least portions of the at least one cable along the conduit to a remote location;

pulsing a fluid along the conduit to intermittently force the at least one cable along the conduit; and

measuring at least one parameter of interest at the remote location by use of the least one cable.

51. The method of claim 50, wherein the remote location comprises a pipeline.

52. The method of claim 50, wherein the remote location comprises a tunnel.

53. The method of claim 50, wherein the remote location comprises a power line.

54. The method of claim 50, wherein the fluid is selected from a fluid, a gas, or a combination thereof.